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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09 882,352 | 06 15 2001 | Noboru Edagawa | 45234 DBP T360 | 8657 |

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EXAMINER

PETKOVSEK, DANIEL J

| | |
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| ART UNIT | PAPER NUMBER |
|----------|--------------|

2874

DATE MAILED: 12 13 2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/882,352

Applicant(s)

EDAGAWA ET AL.

Examiner

Daniel J Petkovsek

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-3, 6-9, 12, 14-16, 19-22 and 25 is/are rejected.
- 7) ☐ Claim(s) 4, 5, 10, 11, 13, 17, 18, 23, 24, and 26 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 16 June 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Note: Pre-Amendments A1 and B1 have been received and accepted.

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The prior art documents submitted by Applicant in the Information Disclosure Statements filed on June 15, 2001, have been considered and made of record (note attached copy of forms PTO-1449).

Drawings

3. The drawings are objected to because in figures 1 and 2, "pumping light" is used. A proposed change to "pumping light" is required in reply to the Office action to avoid abandonment of the application. It is reminded that Applicant is own lexicographer. The objection to the drawings will not be held in abeyance.

Claim Objections

4. Claim 4 is objected to because of the following informalities: "other" at the end of the claim should be changed to "the other". Appropriate correction is required.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(c) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States

for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

5. Claims 1, 3, 7, 9, 14, 16, 20, 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Jain et al. U.S.P. No. 4,784,450.

Jain et al. U.S.P. No. 4,784,450 teach (Fig 3, column 9 line 60 through column 10 line 20) an apparatus for a tunable generation of wavelengths comprising: first 22 and second 20 optical input sources, prisms 40 and 42 that act as a combiner of the optical sources into an orthogonal state of polarization, and a birefringent optical waveguiding region 12 that reduces the degree of polarization of the combined light. The birefringent medium of the waveguide inherently controls the polarization dispersion of the output light.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2, 6, 8, 12, 15, 19, 21 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jain et al. U.S.P. No. 4,784,450.

Jain et al. U.S.P. No. 4,784,450 teach (Fig 3, column 9 line 60 through column 10 line 20) an apparatus for a tunable generation of wavelengths comprising: first 22 and second 20 optical input sources, prisms 40 and 42 that act as a combiner of the optical sources into an orthogonal state of polarization, and a birefringent optical waveguiding region 12 that controls the degree of polarization of the combined light. Jain et al. 450

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does not explicitly teach a depolarizing element as the degree-of-polarization reducer (polarization dispersion control).

Regarding claims 2, 8, 15, and 21, depolarizing elements are well known in the art to reduce the degree of polarization of optical signals. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use any element for polarization control, such as depolarizers, in lieu of the birefringent optical waveguide region 12 of the apparatus of Jain et al. '450, for attaining a desired amount of polarization dispersion control. Regarding claims 6, 12, 19, and 25, although not explicitly disclosed by Jain et al. '450, the properties claimed by Applicant are properties of birefringent materials that are well known in the art. Commonly known birefringent media include rutile crystal and YVO4.

Allowable Subject Matter

8. Claims 4-5, 10-11, 13, 17-18, 23-24, and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Regarding claims 13 and 26, the prior art does not teach or reasonably suggest the further limitations of these dependent claims. Regarding claims 4-5, 10-11, 17-18, and 23-24, the prior art does not teach or reasonably suggest a birefringent medium with these specific polarization properties.

Inventorship

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were

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made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure, with respect to the state of the art of beam splitter/combiners that include a form of polarization/de-polarization: PTO-892 form references B-G, and N.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J Petkovsek whose telephone number is (703) 305-6919. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (703) 308-4819. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 872-9321.



Daniel Petkovsek
December 10, 2002



Brian Healy
Primary Examiner